Anger, Legacies of Violence, and Group Conflict: An Experiment in Post-Riot Acre, Israel*

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Abstract

Extant research hypothesizes that anger over past intergroup conflict serves as a catalyst for future conflict. However, few studies have experimentally tested this hypothesis on a representative sample in a high stakes, field setting. I use a behavioral economics experiment to measure how anger over past conflict influences intergroup relations. Subjects were sampled proportional to population and ethnicity in Acre, Israel, a mixed city of Jews and Palestinian Citizens of Israel (PCIs) that experienced ethnic riots in 2008. The experiment randomly assigned subjects to an anger treatment about the riots or a neutral condition. Subjects then allocated income between themselves and three partners: one from their ingroup, one from their outgroup, and one whose identity was unclear. I find that priming anger over the riots did not increase discrimination. Rather, it reduced altruism to all groups, and this result was strongest for "high aggression" types. Qualitative information suggest that blame for the riots falls on both ingroup and outgroup members.

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1 Motivation

Around midnight on October 8, 2008, on the eve of Yom Kippur, a young Palestinian Citizen of Israel (PCI) resident of Acre, Israel, Taufik Jamal, drove into a predominately Jewish neighborhood.[1] On Yom Kippur Jews—secular and religious alike—refrain from driving, talking on the phone, bathing, and they fast for penance. Jamal was reportedly playing loud music from his car (The Mossawa Center, December 2008, p. 9). The decision to drive into a Jewish neighborhood on one of the holiest days of the years for Jews might have been viewed as innocuous, or simply inconsiderate in other contexts. However in the "mixed" city of Acre this action was seen as deliberatively provocative.[2] As one young Jewish male resident recounted, "he (Jamal) was mocking us on our holiest day...this (Israel) is a Jewish state!"[3]

Jewish youths from the local apartment complex stopped Jamal's car and attacked him.[4] He then fled into a PCI family friend's home awaiting the arrival of the police. More Jewish youths circled the apartment throwing stones and chanting anti-Arab slogans.[5] Later in the night, erroneous rumors spread through the predominately PCI Old City section of Acre that Jamal had been killed (Kershner, 2008; The Mossawa Center, December 2008). Palestinian youths then left the Old City and proceeded to HaMerkaz, the ethnically mixed city center neighborhood, with knives and stones. They vandalized, torched and broke into Jewish shops. The following night Jewish youths responded by torching Arab-owned businesses and burned at least three PCI homes, despite a heavy police presence (Raved, 2008). One PCI resident who had family members injured describes his experience:

> "My friends and I simply went to the city center (HaMerkaz) to make sure our family and friends were alright...we were caught in the middle of the police and the Magav (Israeli Border Police). The police used tear gas on us more than the Jews, even though they (the Jews) were causing most of the problems...my aunt was hit by a rubber bullet

[1] Akko in Hebrew and Akka in Arabic. Throughout the paper I will refer to Arab-Israelis as Palestinian Citizens of Israel (PCIs), as this is their preferred self-identification.

[2] Mixed cities are the name given to Israeli cities where both Jews and PCIs live. Other mixed cities include Haifa, Jaffa, Ramle, Nazareth, Maalot-Tarshiha, Nazareth Illit, and Lod.

[3] Author interview July 27, 2011 Acre, Israel.

[4] `http://www.jpost.com/Features/FrontLines/Article.aspx?id=118150`

[5] The Mossawa Center December 2008 and author interview July 27, 2011 Acre, Israel.

in the leg. The next day all exits from the (walled) Old City were monitored by heavily-armed Magav guys and they scared all of us."[6]

The violence persisted for four nights in total, and came to be known as the Yom Kippur Riots. Approximately 50-60 individuals were arrested, including Jamal, the PCI motorist who drove through the Jewish neighborhood (BBC News, 2008). Thirty homes were damaged, three PCI homes in the predominately Jewish neighborhood beyond repair, and over one hundred cars and eighty shops (both PCI and Jewish) were vandalized (The Mossawa Center, December 2008, p.16). The riots lasted for a total of four nights, and left many residents and observers wondering how the city could so quickly spiral into violence (Susser, 2008).

Scholars have long argued that the emotions–particularly anger–engendered by past ethnic violence serves a motivator for future violence (Horowitz, 2001; Petersen, 2002). Yet to date, there has not been a rigorous testing of this proposition, particularly in communities (like Acre) where anger over past violence is likely to be strongest. I test this hypothesis using a field experiment in Acre in July and August of 2011. 150 Jewish and 147 PCI (297 total subjects) male residents of Acre, Israel were recruited to participate in the experiment. Subjects were sampled proportional to the population and then were randomly assigned to one of two treatment: one that primed anger about the Yom Kippur Riots (*Anger Treatment*) or one that did not (*Neutral Condition*). Afterwards subjects played a behavioral economics game that measured altruism to an ingroup member (Jewish-Jewish; PCI-PCI), an outgroup member (Jewish-PCI, PCI-Jewish), or a partner.

The key finding that emerges is, contrary to the conventional wisdom, priming anger over the riot did not increase discrimination against outgroup members. Rather it reduced altruism to all group members, and this effect was most pronounced at an ingroup-level. The negative effect of anger on altruism was largely driven by the most aggressive subjects. This calls into question previous assumptions about emotions and ethnic violence, as highly aggressive individuals are precisely those who the extant literature suggests should be most swayed towards discrimination by these emotional appeals (Horowitz, 2001; Urdal, 2006). Two secondary findings follow from previous research. (1) I find that there is a large norm of discrimination in Acre: subjects on

[6] Author interview August 9, 2011 Acre, Israel.

average gave almost twice as much income to ingroup members, compared to outgroup members across treatments (Brewer, 1979). (2) Echoing previous findings on exposure to violence, higher levels of riot exposure were associated with greater ingroup altruism (contributions) (Bellows and Miguel, 2009; Blattman, 2009). This latter finding suggests that Acre is not simply an outlier in terms of ethnic conflict, but rather that the effect of anger is distinct from exposure to violence. Structured interviews conducted with Jewish and PCI residents of Acre show that recalled anger of the Yom Kippur Riots did not solely lead to negative feelings towards the outgroup. Rather, it led both groups to express disappointment at outgroup as well as ingroup members for their conduct. These findings have implications beyond Acre. In many ethnically diverse societies politicians attempt to gain political advantage by priming emotions over past ethnic violence (Snyder, 2000). The experiment suggests that responses to such ethnic appeals are not automatically pro-ingroup and anti-outgroup, but rather more circumspect.

The paper is structured as follows. Section 2 provides a theoretical basis for the paper, and Section 3 discusses the sampling of subjects, the experimental protocol, and the effectiveness of the experimental manipulations. In Section 4 I present the empirical results from the experiment, and in Section 5 I interpret the findings in light of qualitative interviews. Further results and robustness checks are discussed in the supplementary information contained in the Online Appendix.

2 Theory

Most empirical studies on the causes of ethnic violence have focused on electoral considerations of elites Wilkinson (2006), interethnic civil society relations (Varshney, 2001), or underlying structural conditions (Cederman, Wimmer and Min, 2010). Yet, other research suggests that psychological factors—particularly emotions play a key role in understanding ethnic conflict and participation. For instances, emotions over past salient events of ethnic conflict can serve as focal rallying points in "intractable conflicts" (Bar-Tal, 2001). Scholars of ethnic politics have theorized that leaders manipulate emotions over past intergroup violence to make ethnic identities salient, and foment intergroup conflict for political gain (Snyder, 2000). Anger marshaled over past intergroup violence is argued to be a motivating factor in ethnic violence such as the Yom Kippur Riots (Horowitz,

2001). Furthermore, recent research suggests that exposure to intergroup violence is thought to influence prospects for peaceful resolution of conflicts (Benmelech, Berrebi and Klor, 2009; Lyall, 2009; Voors, Nillesen, Verwimp, Bulte, Lensink and Van Soest, 2012).[7] *The extant literature suggests that priming anger over past intergroup conflict (such as the Yom Kippur Riots) will lead to increased in ingroup cohesion, and increased animosity to the outgroup, resulting in higher levels of discrimination and integroup conflict (Discriminatory Hypothesis).* In this framework, anger over past ethnic violence is a catalyst for future ethnic violence and discrimination, by making ingroup-outgroup distinctions more salient.

Recent psychological research presents a more nuanced theory of anger in intergroup conflict (Maitner, Mackie and Smith, 2006; Zeitzoff, 2014). Anger is considered a core emotion that prepares individuals to correct perceived offenses and take action (Frijda, Kuipers and ter Schure, 1989; Lerner and Keltner, 2001). The target of anger can be an individual, or a particular group when group-based identities are salient (Banks and Valentino, 2012; Mackie, Devos and Smith, 2000; Tajfel and Turner, 1979). In intergroup settings, anger can lead individuals to support taking risks for both peace and military action (Halperin, Russell, Dweck and Gross, 2011; Huddy, Feldman and Cassese, 2007). Furthermore, anger has been shown to serve a "regulatory" function, providing an impetus for individuals and groups to take actions and signal their resolve, thus correcting past transgressions (Halperin, Sharvit and Gross, 2011; Maitner, Mackie and Smith, 2007; Tamir, Mitchell and Gross, 2008) and preventing future ones (Sell, Tooby and Cosmides, 2009; Sell, 2011).

When the outgroup is considered to have transgressed, priming intergroup anger can lead ingroup members to lash out at the outgroup. However, in situations where ingroup members are believed to have behaved 'inappropriately,' priming anger can lead to decreased support for the ingroup. In many intergroup settings, members of different groups may not particularly like each other, but the status quo is wary cooperation, rather than outright conflict (Fearon and Laitin, 1996). Acre is no exception.[8] Riots, such as the Yom Kippur Riots, are considered a rupture in status quo intergroup relations. During the spiral of ethnic violence, both members of ingroup and

[7] However, the results of exposure to violence are varied, with Lyall (2009) finding it decreases the willingness to seek revenge against the outgroup, and Benmelech, Berrebi and Klor (2009) finding the opposite.

[8] See `http://www.merip.org/mero/interventions/recipe-riot`

outgroup commit transgressions. In the case of the Yom Kippur Riots many Jews and PCIs blamed both members of their ingroup and the outgroup for the violence (Kershner, 2008; Sarna, 2008). A common sentiment among residents in post-riot Acre was the following, "Arab and Jew have always lived in harmony (in Acre)—those who did (participated in the riots) are the extremist minority from either side"(Sharp, 2008). An alternative hypothesis, based off this more nuanced theory of intergroup anger, suggests that *priming anger over the Yom Kippur Riots will lead individuals to express disappointment in the way members of both their ingroup and outgroup behaved. Both Jews and PCIs will be less altruistic to members of ingroup and outgroup members (Regulatory Anger Hypothesis).* The *Discriminatory Hypothesis* predicts that subjects primed for anger over the riots will be more discriminatory, whereas the *Regulatory Anger Hypothesis* hypothesis predicts that priming anger over the riots will decrease altruism to both ingroup and outgroup members. The experiment conducted in Acre allows for a test of these two competing hypotheses.

3 Setting, Sampling, Experiment, and Manipulation Checks

In this section, I give a brief background on intergroup relations in Acre, and an overview of the recruitment, sample, and the experimental protocol. More detailed information on the sampling and experimental protocol can be found in the Online Appendix.

3.1 Research Setting

Acre is a mixed city of 50,000 in which approximately one-third of the residents are PCIs and two-thirds are Jews (Central Bureau of Statistics, 2011). PCIs are concentrated in the southern area of the city known as the Old City.[9] The city center (HaMerkaz) is evenly split between Jews and PCIs, while Jews make up the dominant majority in the eastern neighborhoods.[10] These eastern neighborhoods, Shuknah Burla, Neve Alon, Neve Aviv, Ben Gurion and Avraham Danino, of the city are collectively known as the "Shikun."[11] The segregated nature of the city stems from the 1948 Arab-Israeli War. Before the war, Acre's population of 15,500 was over 90 % Arab (Torstrick,

[9]The Old City is what remains of a former walled Crusader city.
[10]See Falah 1996 and Central Bureau of Statistics 2011.
[11]Literally "neighborhood" in Hebrew.

2000, p.52). After Jewish forces captured the city, a large percentage of the Arab population was forced into exile as refugees (Morris, 2004, p. 229), with the remaining families confined to the Old City under Israeli military control. PCIs continued to live under military jurisdiction until 1966, when PCI residents from the Old City, along with PCIs from surrounding villages, began to move into the HaMerkaz.[12] Meanwhile, the Shikun neighborhood housed a continual wave of Jewish immigrants: first Mizrahi[13] (1950's-1960's), and then later Jews of Soviet origin (1970's and again in 1990's) (Falah, 1996). More recently, the Shikun has seen an influx of Religious Zionists and former Jewish settlers from Gaza after the 2005 Israeli disengagement from Gaza.

This unique geographic and demographic position has made it a continual focal point and barometer for Jewish-PCI tension (Izenberg, October 23, 2008; The Mossawa Center, December 2008; Torstrick, 2000). For example, in 1969 the arrest of six PCI residents of Acre suspected of terrorism and sabotage led to rioting by the city's Jewish residents. Local police had to intervene to stop Jewish residents from marching on the Old City (Torstrick, 2000, p. 74-75). In 1986, against the backdrop of the First Intifadah, several PCI youths attacked a local police station and freed three prisoners in retaliation for the appointment of a perceived anti-PCI special adviser to Acre on tourism (Rudge, 8 September 1986). More recently in October 2000, Acre was one of the cities in Israel rocked by violent confrontations between Israeli police and PCIs at the start of the Second Intifada (Bennett, September 1, 2003).

3.2 Sampling

Male residents of Acre between the ages of 22 and 65 participated in the study in July and August of 2011.[14] They were sampled proportional to population from three neighborhoods in Acre with differing percentages of Jewish (PCI) residents.[15] The three neighborhoods and their geographic boundaries according to the Israeli Central Bureau of Statistics (Central Bureau of Statistics,

[12] Torstrick 2000, p.72-73.

[13] Literally 'Eastern Jews.' This is the term for Jews from Arab lands.

[14] I wanted to include females in my sample. However, residents with local knowledge of Acre were worried that conservative females would not participate or freely express their views. Additionally, most acts of aggression are committed by males, so excluding females does not greatly reduce the external validity of this study.

[15] There are two principal ethnic groups–Jews and PCIs–in Acre. So the absence of one group signifies the presence of the other.

2011) are the Old City, the City Center (HaMerkaz), and Shuknah Burla in the Shikun. The neighborhoods were selected for two reasons. (1)They provide natural variation in ethnicity–with the the Old City being almost all PCI (97% PCI), HaMerkaz mixed (51.9% Jewish), and Shuknah Burla almost all Jewish (94% Jewish) (Central Bureau of Statistics, 2011). Therefore, only PCIs were sampled from the Old City, only Jews from Shuknah Burla, and both groups from HaMerkaz.[16] (2) The neighborhoods also corresponded to those neighborhoods largely affected by the riots.[17] A map of the neighborhoods including enumeration areas is shown in Figure 1:

[Figure 1 Here]

3.3 Sample Characteristics

[Table 1 Here]

Table 1 presents the mean sample demographics for Jews and PCIs broken down by neighborhood. On average the PCI sample is younger than the Jewish sample. PCIs in HaMerkaz have on average higher levels of education and labor force participation than any of the other neighborhoods.[18]

[16]In discussions with local representatives, I avoided sampling Jews from the Old City and PCIs from Shuknah Burla. This was done for three reasons. (1) The Israeli Central Bureau of Statistics only presents the dominant percentage of each religious group. So inference on the actual number of minority groups, particular in the Jewish-dominated Shuknah Burla and PCI-dominated Old City, is difficult to estimate. Local residents of the Old City estimated the number of Jews living there to be $< 1\%$. Furthermore, the number of PCIs in Table 1 only includes the number of Muslims. The disparity can be rectified by remembering that there is a small minority of Christian PCIs that live in the Old City. (2) Following the riots, several PCI families have moved out of Shuknah Burla (The Mossawa Center, December 2008; Peraino, 2009), so the percentage of Jews is higher than the 2008 census statistics (Central Bureau of Statistics, 2011) would suggest in Table 1. (3) Finally, the very small minority of Jews and PCIs that live in outgroup-dominated neighborhoods are likely to be different than Jews or PCIs who reside in the other neighborhoods. Given their small numbers, these individuals would have to have been over-sampled (at the expense of Jews and PCIs from the other neighborhoods) in order to pick up meaningful effects.

[17]The riot began in Shuknah Burla, and then spreading to the HaMerkaz and the Old City. This information was compiled from author interviews with residents of Acre and (BBC News, 2008; The Mossawa Center, December 2008) news accounts.

[18]I chose to use labor force participation in place of income, as there is a fair amount of missing income data ($\approx$10%). Conversely, there is no missing data on labor force participation, there is a high correlation ≈ 0.6 between income and labor force participation, and Central Bureau of Statistics (2011) only gives labor force participation data broken down by neighborhood.

3.4 Experiment

Extant studies of anger and intergroup conflict suffer from either external or internal validity issues. These issues can be further classified into at least one of the three following research design problems. (1) Most studies of intergroup conflict lack micro-foundations. They implicitly assume that individuals exposed to past intergroup violence become angry when reminded of the violence (Benmelech, Berrebi and Klor, 2009), or that leaders are easily able to mobilize them by manipulating anger over the past violence (Snyder, 2000; Wilkinson, 2006). Yet, they only measure aggregate outcomes such as riots (Wilkinson, 2006), or insurgent attacks (Lyall, 2009), and not individual behavior. (2) Even those studies that do use individual data, measure attitudes and not behavior.[19] (3) Finally, they use student or convenience samples (Mackie, Devos and Smith, 2000), thereby making generalizations to populations living in tense ethnic settings difficult. To improve upon these shortcomings, my experiment (1) sampled subjects proportional to population and ethnicity from relevant neighborhoods in Acre, (2) randomly primed anger (over the riots), and (3) measured behavior (altruism) towards ingroup and outgroup members.

The behavioral game portion of the experiment closely modeled how individuals conceptualize group conflict: a subject could maximize the total payoff for themselves and their partners (social welfare), or maximize their own personal income at the expense of their partners' income (Bar-Tal, 2001). Furthermore, I am also able to compare ingroup versus outgroup allocations using the partner's neighborhood as a realistic, but subtle signal of their partners' ethnic identity. Finally, subjects did not further interact with their partners whom they were dividing money, so the division represents a cleaner measure of intergroup conflict, not clouded by concerns of reciprocity.

Following a brief set of demographic questions, subjects were randomly assigned to one of two treatments–an *Anger Treatment*, or a *Neutral Condition*. In the *Anger Treatment*, subjects were shown a picture from the riot, then asked to write about the one thing that made them "most angry about the riots." The *Anger Treatment*–where subjects are prompted to recall a specific emotion about an event, and write about it–is derived from Ekman (1992), and has been used extensively

[19] For instance Halperin, Russell, Dweck and Gross (2011). Brewer (1979); McConnell and Leibold (2001) and Whitt and Wilson (2007) argue persuasively why it is better to measure behavior, as opposed to attitudes, when trying to tap into intergroup attitudes.

in political psychology (Lerner, Gonzalez, Small and Fischhoff, 2003; Myers and Tingley, 2011; Zeitzoff, 2014). Subjects in the *Neutral Condition* were given a prompt orthogonal to the riot. They were shown a picture of an aerial view of Acre–and asked to write about things that Acre could do to improve tourism. The *Anger Treatment* intentionally did not prime a particular target for anger, as anger over past ethnic violence in an ethnically charged environment (such as Acre) is theorized as sufficient to increase conflict and discrimination(Horowitz, 2001; Messick and Mackie, 1989).[20] Full wording of the treatments and pictures used are contained in the Online Appendix.

Following the emotional manipulation, subjects played a behavioral economics game. In the game subjects chose to divide income between themselves and partners from different neighborhoods. Neighborhoods were selected to serve as a signal of their partners' ethnicities.[21] The division of income game built on previous games where subjects divided income between groups (Brewer, 1979; Whitt and Wilson, 2007). However, in the current experiment subjects made a trade-off between maximizing the joint income with their partner (social welfare), or maximizing their own income (relative differences). The *Discriminatory Hypothesis* would suggest that subjects primed for anger over the riots, both Jews and PCIs should be more altruistic (take less) to their ingroup members and less altruistic (take more) to outgroup members (compared to subjects not primed for anger).

For each neighborhood subjects selected one division of income between themselves and an anonymous partner from the other neighborhood. The potential income divisions subjects could choose from in Israeli Shekels (NIS) are presented in Table 2.

[Table 2 here]

Following the behavioral economics game, I had subjects complete a post-experiment survey that gauged political attitudes and their level of exposure to the riots. Subjects were asked in the post-experiment survey whether they themselves, their family, or any of their close friends suffered physical harm or property damage as a result of the riots. Each subject was assigned

[20] I.e. even more ambiguous actions taken by outgroup members are likely to be viewed in a negative or hostile way.

[21] As Zizzo (2010) argues, using "Jewish partner," or "PCI partner" could have potentially biased the results by cueing subjects to the fact that we are interested in intergroup relations.

a *Riot Exposure* score based on how close they were to someone who experienced physical harm and/or property damage from the riots. Closer relations with someone who was injured and/or suffered property damage were assigned higher scores.[22] Subjects in the Old City report higher levels of physical riot exposure than the other neighborhoods. I also asked additional questions about their perceptions of the outgroup, level of intergroup contact, and demographic questions (age, education, and job status). Description and summary statists for these variables broken down by ethnicity are presented in Table 5.

3.5 Manipulation Checks

3.5.1 Neighborhood and Ethnicity

The first relevant manipulation is to see if each neighborhood properly signaled its group affiliation to subjects.[23] In the post-experiment survey subjects were asked for each neighborhood—Old City, HaMerkaz, and Shuknah Burla—what they thought was the percentage of Jews (outgroup member for PCIs and ingroup for Jews) living in each neighborhood. Both Jews and PCIs accurately gauged the rank ordering of the percentage Jews by neighborhood (i.e. Shuknhan Burla > HaMerkaz > Old City in terms of the percentage of Jews), and both groups fairly accurately assessed the correct percentages. Both Jews and PCIs recognized that Shuknah Burla had greater number of Jews than HaMerkaz (for PCIs $J_{diff} = 25.56$ and $p < 0.001$ and for Jews $J_{diff} = 26.29$ and $p < 0.001$). They also were cognizant that HaMerkaz had greater number of Jews than the Old City (for PCIs $J_{diff} = 48.8$ and $p < 0.001$ and for Jews $J_{diff} = 40.07$ and $p < 0.001$). Finally, Jews and PCIs both correctly perceived that Shuknah Burla had a greater number of Jews than the Old City (for PCIs $J_{diff} = 74.32$ and $p < 0.001$ and Jews $J_{diff} = 66.36$ and $p < 0.001$).[24]

[22] For instance someone who personally suffered property damage and a member of their extended family was injured in the riots would receive a score of 4+1=5. Additional discussion and robustness of the *Riot Exposure* findings are presented in the Online Appendix.

[23] As the sample data and demographic data presented in the Online Appendix show, the neighborhoods also vary in how wealthy they are. So perhaps subjects also had economic concerns–wanting to take money from rich neighborhoods and give to the poor neighborhoods. In the Online Appendix, I control for wealth perceptions, and the results do not change.

[24] These are from two-tailed t-tests of % Jewish (X) in each neighborhood (i, j) are equal $X_i = X_j$. So $J_{diff} = X_i - X_j$

3.5.2 Anger Manipulation

The second relevant manipulation to explore is the effect of the *Anger Treatment*. To test whether the *Anger Treatment* changed subjects' reported anger relative to the *Neutral Condition*, I construct a t-test with unequal variances. For the emotional manipulation to be successful, subjects in the *Anger Treatment* should have reported higher levels of anger than subjects in the *Neutral Condition*.[25] Anger was measured using the sum of self-reported angry, hostile, and furious feelings in the manipulation check following the emotional treatments on 5-point scale.[26] Jews reported higher levels of anger in the *Anger Treatment* than the *Neutral Condition* ($A_{diff} = 1.99$ and $p < 0.001$). The *Anger Treatment* was also effective in manipulating levels of anger for PCIs ($A_{diff} = 2.24$ and $p < 0.0001$).[27]

4 Results

4.1 Treatment Effects

There are two key questions: (1) were Jews and PCIs more altruistic to their ingroup and biased against the outgroup (discrimination), and (2) what was the effect of the *Anger Treatment* on contributions across the different neighborhoods (groups)?

[Figure 2 Here]

Figure 2 examines how much subjects chose to give to their partners comparing Jews to PCIs pooled across the *Anger Treatment* and *Neutral Condition*. It is clear from Section 3.4.1 that subjects recognized neighborhood as a signal of group identity. Figure 2 further shows that there was a strong norm of discrimination along group (neighborhood) lines for both Jews and PCIs. Jews favored their predominately ingroup neighborhoods by contributing more to Shukhnah Burla

[25] Where A_{diff} is the difference in reported levels of Anger in the *Anger Condition* relative to *Neutral Condition*.

[26] The manipulation check asked "Thinking about yourself and how feel, to what extent do you feel this way NOW." The emotional scale was from (1) "not at all" to (5) "completely"

[27] I also measured levels of fear in the manipulation check and for PCIs, it marginally raised reported levels of fear ($A_{diff} = 0.28$ and $p < 0.12$). However, in mediation analysis (not shown), the treatment effects are not mediated via fear for PCIs. In addition PCIs and Jews did not have statistically different levels of anger or responses to the *Anger Treatment*.

(C_{diff} = 12.6 and $p < 0.001$)[28] than PCIs. PCIs did the same by contributing more to the Old City than Jews ($C_{diff} = -14.52$ and $p < 0.001$).

The pattern of discrimination holds when I only examine individuals who live in the mixed HaMerkaz.[29] PCIs from the Hamerkaz were even more discriminatory against the Jewish neighborhood of Shuknah Burla ($C_{diff} = 17.2$ $p < 0.001$) than residents of the Old City. Additionally, PCIs contributed more to the PCI neighborhood of the Old City ($C_{diff} = -6.70$ $p < 0.005$) than Jews did.

The results from Figure 2 and perceptions of neighborhood ethnicity (Section 3.5.1) demonstrate that a partner's neighborhood correctly signaled ingroup, outgroup or ambiguous (HaMerkaz) status, and subsequent discriminatory behavior. For the remainder of the paper, I define ingroup contributions as Jewish contributions to Shuknah Burla and PCI contributions to the Old City. Conversely, outgroup contributions are defined as Jewish contributions to the Old City and PCI contributions to Shuknah Burla. For both Jews and PCIs, contributions to the ethnically mixed neighborhood of HaMerkaz are referred to as "mixed" due to their ambiguous ethnic status.

How did the *Anger Treatment* influence subjects' contributions between their ingroup and outgroup? Figure 3 reports the treatment effects by looking at the difference in means (two-tailed t-test with unequal variance) for subjects' contributions to their ingroup, mixed neighborhood (HaMerkaz), outgroup, and discrimination (the difference between ingroup and outgroup contributions) for those in the *Anger Treatment* versus those in the *Neutral Condition*.

[Figure 3 Here]

Figure 3 shows that the *Anger Treatment* decreased contributions for all the neighborhoods and quantities of interest.[30] The raw average treatment effects (ATE and black estimates in Figure 3) for the mixed ($\delta = -1.65$ and $p < 0.198$) and outgroup ($\delta = -0.868$ and $p < 0.583$) neighborhoods, as well as discrimination ($\delta = 1.31$ and $p < 0.440$) between ingroup and outgroup are negative, but not significantly different from 0. The *Anger Treatment* also significantly lowered contributions to

[28] C_{diff}=C_{Ji}- C_{PCIi} where C_{Ji} is how much Jews contributed and C_{PCIi} is how much PCIs contributed to neighborhood i.

[29] This separates identity concerns from subjects "just being nice to their neighbors."

[30] Treatment effects are defined as the difference in average contributions between the *Anger Treatment* and *Neutral Condition* $\delta = C_{anger} - C_{neutral}$

the ingroup ($\delta = -2.18$ and $p < 0.083$)—albeit at a marginal level of significance. The blue bars are OLS estimates of the *Anger Treatment* that include sample controls (Jewish and neighborhood of residency) and post-stratification weights to correct for the low response among Jewish subgroups. The treatment effects controlling for the sample design, show the same negative effect as the raw ATE (point estimate), but improve the efficiency. Both the raw ATE and effect with sample design controls show that the *Anger Treatment* led to a decrease in altruism to all groups. Priming anger over the riots does not appear to have increased discrimination–finding support for the *Regulatory Anger* hypothesis.[31]

Table 3 examines the results including controls for *Riot Exposure* and other covariates. Panel A shows the results without post-stratification weights,[32] and Panel B with post-stratification weights. The results confirm the negative effects of the the *Anger Treatment*, particularly for ingroup members, even after controlling for demographic and ideology variables.

The findings in Panel A and B also show that higher levels of *Riot Exposure* were associated with greater ingroup contributions and discrimination, echoing previous findings that violence exposure increases ingroup altruism (Gilligan, Pasquale and Samii, 2012; Voors, Nillesen, Verwimp, Bulte, Lensink and Van Soest, 2012). These findings for the effect of *Riot Exposure* are important for two reasons. First, they show that Acre is not an outlier when it comes to responding to exposure to ethnic violence. Exposure to violence increased ingroup altruism, and hence discrimination. Second, the finding that priming anger over past violence had a distinct effect on altruism towards the ingroup, relative to actual exposure to violence, is important. The previous literature theorizes a tight coupling between violence exposure, and anger, with the violence exposure leading to anger, and eventual conflict and discrimination (Horowitz, 2001; Petersen, 2002). The findings here suggest that the relationship may not be so straightforward.

[Table 3 Here]

[31] In the Online Appendix, I disaggregate the results (looking at PCIs and Jews separately), explore the sampling mechanisms, look at neighborhood perceptions, explore heterogenous treatment effects, and different model specifications. The results confirm those in Figure 3 and Table 3 that the *Anger Treatment* reduces altruism.

[32] Post-stratification weights are meant to correct for potential biases in the response rate amongst Jews. They match the sample to demographic data from the Israeli Central Bureau of Statics (Central Bureau of Statistics, 2011).

An alternative interpretation of the negative effects of the *Anger Treatment* in Table 3 and Figure 3 might be that perhaps the *Neutral Condition* was actually "pro-social," and that *Anger Treatment* was simply the "control." Subjects in the *Neutral Condition* might have been more generous to ingroup and outgroup members, and the *Anger Treatment* would provide a baseline level of contribution. Whether my argument, or this alternative interpretation is more likely is fundamentally unidentified. However, I can use the fact that there is substantial discrimination in Acre between ingroup and outgroup members to see which explanation is more likely. Approximately 1/3 of individuals gave the maximum amount to ingroup members, and 1/3 gave the minimum amount to outgroup members (pooled across treatments). If the *Neutral Condition* increased contributions, then one would expect there to be larger, and more significant treatment effects on outgroup contributions relative to ingroup contributions, as ingroup contributions were already fairly high (ceiling effects). In contrast, if one believes the argument put forth here—the *Anger Treatment* decreased contributions across groups—then one would expect to find more significant effects for ingroup contributions relative to the outgroup, as outgroup contributions are already fairly low (floor effects). The stronger and more significant results for the treatment effect on ingroup contributions across specifications supports the the main finding and interpretation: the results are largely driven by the *Anger Treatment* decreasing altruism (contributions).

4.2 Anger and Aggressive Men

The results strongly suggest that the *Anger Treatment* did not lead to greater ingroup favoritism, or discrimination more generally. In fact, the strongest and most robust findings are that it reduced ingroup contributions. However, it may be that there are heterogenous treatment effects. Perhaps aggressive males were more affected by the priming of the riots than less aggressive males? Scholars of political violence argue that most acts of intergroup violence such as riots are committed by aggressive, young men (Horowitz, 2001; Urdal, 2006). To see whether high aggression individuals responded with greater discrimination than low aggression individuals to the *Anger Treatment*, I split the data on the empirical distribution of responses to the *Physical Aggression* question: "given enough provocation, I may hit another person" on a 7-point agreement scale (1=strongly disagree

to 7 strongly agree).[33] Individuals who scored above 50% of responses on the *Physical Aggression* (3 or above) are coded as "High Aggression." Those who answered below 50% of respondents (1 or 2) are coded as "Low Aggression." I then see whether "High Aggression" and "Low Aggression" types responded differently to the *Anger Treatment* for ingroup and outgroup allocations and the difference between the two (discrimination) in Table 4.

Table 4 reports the results for "High" vs "Low Aggression" types. The *Anger Treatment* did not make the most aggressive subjects more discriminatory. Conversely, the negative effects of the *Anger Treatment* for both ingroup and outgroup are largely driven by the "High Aggression" subjects—precisely those that the extant research identifies should have been the most reactive and discriminatory (Horowitz, 2001, p.119). The findings do not depend on whether the regressions are run without controls (Panel A), with controls (Panel B), or with controls and post-stratification weights (Panel C). Anger over the Yom Kippur Riots did not mobilize people to be more discriminatory, but rather reduced altruism to both ingroup and outgroup members, and this is particular true for the most aggressive individuals.

Israel has a reputation as an aggressive and very direct culture.[34] If the *Discriminatory* hypothesis is correct, then priming anger over past violence should have increased discrimination, and I should have found this discriminatory effect among "High Aggression" men living in Acre, Israel, a lower-income, ethnically tense city. Instead, I show that priming anger over the Yom Kippur Riots led to decreased contributions to *both ingroup and outgroup* members, and the result is driven by the "High Aggression" types. This suggests an alternative, more nuanced effect of anger, in line with the *Regulatory Anger* hypothesis. In the next section I provide context and interpret this more nuanced effect of anger and suggest plausible mechanisms.

[Table 4 here]

[33] This question is drawn from the canonical Buss and Perry (1992) Aggression Questionnaire. A full list of correlates of being a "High Aggression" respondent is presented in the Online Appendix.

[34] For examples see Miguel, Saiegh and Satyanath (2011). Also as stated in an official "Tips for Doing Business in Israel" put out by the Israeli Ministry of Industry, Trade, and Labor describes Israel's direct culture, "(the) Israeli, who is often perceived as being arrogant, aggressive and pushy, is actually being direct and honest." See `http://www.tamas.gov.il/NR/exeres/3614E1A7-2D84-4F27-A4DC-3585A6F6450E.htm`

5 Interpretation and Conclusion

Two key findings emerge from the empirical analysis. (1) Priming anger over the Yom Kippur Riots decreased altruism to all groups, and the effect was most pronounced for ingroup members. (2) Riot exposure appears to have had the opposite effect, with it increasing ingroup contributions and discrimination.

The negative effect of the *Anger Treatment* on altruism is most strongly felt at an ingroup-level, and is largely driven by the most aggressive individuals. This goes against the *Discriminatory Hypothesis*, and conventional wisdom that simply cuing anger over past violence leads to increased discrimination and intergroup conflict. Rather it suggests that anger has a more nuanced role, in line with the *Regulatory Anger Hypothesis*. In-depth interviews I conducted with Jewish and PCI residents suggest a possible mechanism for the *Anger Treatment's* generalized decrease in altruism—individuals were upset with the behavior of both ingroup and outgroup members during the riots.

For Jews, the targets of their ire over the Yom Kippur Riots were diffuse. Some Jews blamed the PCIs writ large, saying the decision by the PCI motorist to drive into the predominately Jewish neighborhood on Yom Kippur was part of systematic provocation by PCIs in Acre. As one Jewish resident of Shuknah Burla in his late twenties told me, "they were teasing and mocking us (Jews) on Yom Kippur."[35] Other Jews directed their anger toward the Israeli central government, who they feel has"abandoned us (Jews)" in Acre. Conversely, many others anger over the riots was more circumspect. As one young resident of Burla recounted, "I have no problems with Arabs. These young Jewish guys are idiots. They only started something because they have nothing better to do...and same with the Arab guys who responded (and participated in the riots)."[36] Jews of different political views laid the blame for the riots on different actors. Yet their anger was targeted at both their ingroup (other Jews) and the outgroup.

The target of anger of PCI residents was also varied, and directed at ingroup and outgroup members. One of the common refrains stated by PCIs was that the attack on the PCI motorist

[35] Author interview July 27, 2011 Acre, Israel.
[36] Author Interview June 28, 2011 Acre, Israel.

that sparked the riot was justified. However, later actions, such as attacking PCI houses in Shuknah Burla was not. They also expressed anger at their perceived disproportionate exposure to the riots. As one PCI resident of HaMerkaz in his 50's stated, "the Jewish guys should only have gone after him (the PCI motorist)...if one PCI guy does something wrong, he is responsible, not all PCIs."[37] What made the PCI residents angry was the disproportionate response of the Jewish residents of Acre and the Acre police. A male resident of the Old City who had family injured in the riots described, "the police were not prepared and did not protect the PCI families and their homes in Shuknah Burla...and when they used tear gas (on the protesters)...all the tear gas was sent towards our (the PCI) side."[38]

The null effect of anger over the riots on discrimination should not be misconstrued as a reduction in outgroup-directed animosity in post-riot Acre. Discrimination is largely the norm in Acre. Yet, Jews and PCIs also expressed anger at the behavior of their fellow ingroup members in disrupting the status quo. PCIs in particular condemned the actions of Jamal, the PCI driver who drove into Burla on Yom Kippur eve, and the Acre police. Rather than rallying around their ethnic group, the anger over the riots cued memories of both sides (ingroup and outgroup) not handling the situation properly. This suggests that elites attempting to foment interethnic violence in ethnically charged environments may not be so easily able to use anger of past violence as a catalyst for future violence.

An equally important finding is that exposure to violence (*Riot Exposure*) increased ingroup altruism, which is well-supported by previous research (Bellows and Miguel, 2009; Gilligan, Pasquale and Samii, 2012; Voors, Nillesen, Verwimp, Bulte, Lensink and Van Soest, 2012), and that this effect was distinct from the effect of anger over the riots. Cuing anger over violence does something different than exposure to violence. Being directly exposed to interethnic violence reinforces ingroup altruism, whereas anger over violence does the opposite.[39] This calls into question extant models of ethnic violence where exposure to violence predisposes individuals to be more receptive to emotional appeals, and subsequent ethnic conflict (Petersen, 2002). Furthermore, the *Anger*

[37] Author interview August 9, 2011 Acre, Israel.
[38] Author interview August 9, 2011 Acre, Israel.
[39] In the Online Appendix I show that the *Anger Treatment* is not moderated by *Riot Exposure*.

Treatment findings align with recent research that anger in the context of conflict, does not always worsen discrimination, and can actually lead to positive political change and reduce conflict (Tagar, Federico and Halperin, 2011).

A key question is how generalizable are the results of the current study that anger over past ethnic violence does not exacerbate current intergroup conflict? This question rests on whether the 2008 Yom Kippur riots, and Acre more generally, represent other ethnically tense areas. According to the Minorities at Risk (MAR) Project over 90% of ethnic conflict falls short of civil war (Center for International Development and Conflict Management, 2009).[40] Conversely, most studies of the effects of riots and ethnic violence have focused on high-fatality riots and civil war (Horowitz, 2001; Petersen, 2002; Scacco, 2009; Wilkinson, 2006). Some of the best data on ethnic riots comes from the US race riots in the 1960's, and they find that over 90% of race riots did not result in any fatalities (Carter, 1986; Collins and Margo, 2004).[41] While civil war and deadly ethnic riots represent important cases, Acre is closer to the modal level of ethnic tension (high levels of discrimination, with no fatalities). This suggests that majority of other ethnically tense areas–those not engaged in outright civil conflict or with high levels of past violence–are likely to have similar reactions to anger over past violence. This is especially true if blame for the past violence falls on both ingroup and outgroup members (such as the Yom Kippur Riots in Acre).[42] While anger over past violence may lead to decreased overall altruism, the current paper suggests that it may not worsen conflict between groups in lower tension areas.

The results from the experiment paint a nuanced version of how anger over legacies of violence influence current ethnic relations. Individuals appear to have more circumspect responses to emotional primes over past violence that may prevent its future outbreak. Rather than leading individuals to react with greater discrimination, the anger decreased altruism to all groups. The findings also point the way toward future research. The experimental set-up in this paper was

[40] While there are well-documented issues associated with the MAR project (Hug, 2013), I am more interested in general patterns of ethnic violence. If anything the inclusion of groups already threatened (i.e. selection bias of groups) that may present in MAR data, only strengthens my claim that most ethnic conflict is not as violent as ones that have been studied.

[41] Further confirming that deadly riots are the exception, rather than the norm, a survey of historical riots in the US by Gilje and Tuchin (2009) found that over 70% of all riots do not contain any fatalities.

[42] I am grateful to an anonymous reviewer for making this point.

agnostic to both the target of the anger and the level of group threat for two reasons. (1) It provided a baseline measure of the effect of priming anger over past violence on group conflict. (2) Extant theories of intergroup conflict suggest that even in the absence of clear outgroup culpability (e.g. like the Yom Kippur Riots), ingroup members are still likely to view outgroup members's actions in a negative light (Messick and Mackie, 1989). The findings from this experiment question these assumptions, and show that anger over past ethnic violence is likely not sufficient to increase intergroup conflict. Recent research further shows that even when anger is channeled towards the outgroup it can actually lead the ingroup to take more risks for peace (Halperin, Russell, Dweck and Gross, 2011). Yet, there is reason to think politicians may strategically try to heighten both group threat and channel anger toward the outgroup (De Figueiredo and Weingast, 1999; Snyder, 2000). In future research, manipulating group threat and the target of anger may help researchers tease apart when priming anger over past intergroup conflict falls on deaf ears, and when it leads to conflict.

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A Appendix

[Table 5 here]

Figure 1: **Neighborhoods Surveyed in Acre**

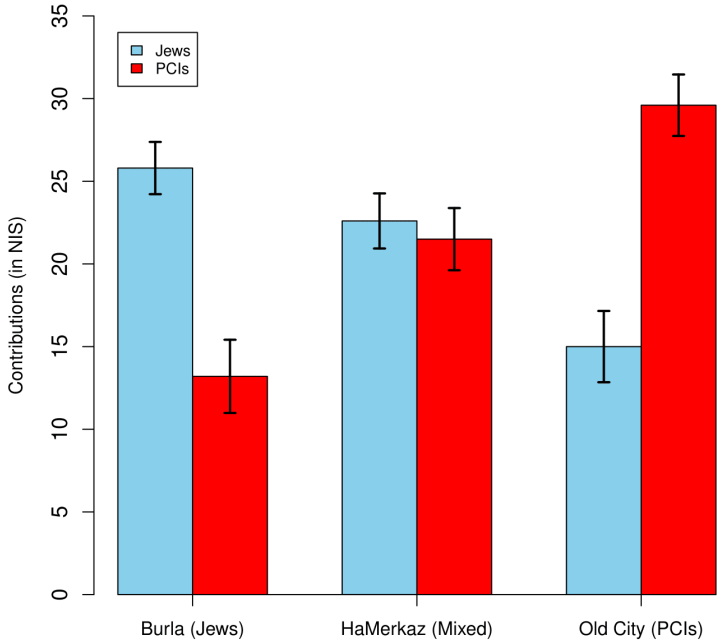

Figure 2: **Mean Contribution for Each Neighborhood (By Ethnic Group)**
Bars represent 95% Confidence Intervals

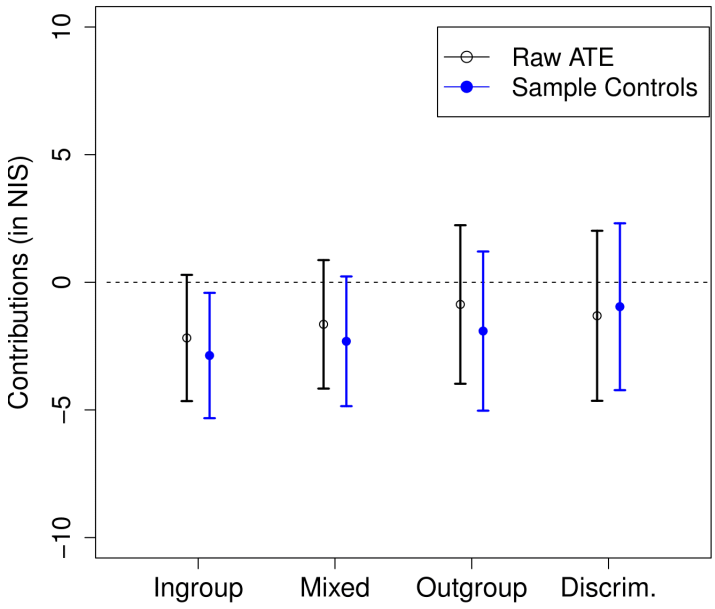

Figure 3: **Treatment Effect of Anger on Contributions**

Bars represent 95% Confidence Intervals. The estimate with the black bars shows the raw difference in means across the *Anger Treatment*. The estimates with the blue bars present an OLS estimate for the *Anger Treatment* controlling for the sample design (dummy variable for Jewish, neighborhood of residency) include post-stratification weights for Jews.

	Shuknah Burla (Jews)	***HaMerkaz*** (Jews)	(PCIs)	***Old City*** (PCIs)
Average Age	41.4	44.4	38.2	35.6
% Born in Israel (Jews)	69.7	68.9	—	—
%Matriculation Cert.	55.1	41.0	73.0	35.7
% Participate in Labor Force	73.0	62.3	85.7	51.2
Riot Exposure	1.07	1.12	0.52	1.64
Total # of Subjects	89	61	63	84

Table 1: **Mean Sample Demographics by Neighborhood and Ethnicity**

Choice	**How much I take from my partner**	**How much I add to my own income**	**My final income**	**My partner's final income**
	0 shekels	0 shekels	20 shekels	40 shekels
	5 shekels	2 shekels	22 shekels	35 shekels
	10 shekels	4 shekels	24 shekels	30 shekels
	15 shekels	6 shekels	26 shekels	25 shekels
	20 shekels	8 shekels	28 shekels	20 shekels
	25 shekels	10 shekels	30 shekels	15 shekels
	30 shekels	12 shekels	32 shekels	10 shekels
	35 shekels	14 shekels	34 shekels	5 shekels
	40 shekels	16 shekels	36 shekels	0 shekels

Table 2: **Monetary Choices**

	Dep. Variable: Contributions			
	Ingroup	**Mixed**	**Outgroup**	**Discrim.**
	(1)	(2)	(3)	(4)
		PANEL A		
Anger Treatment	-2.42**	-2.11+	-1.50	-0.92
	(1.13)	(1.28)	(1.58)	(1.62)
HaMerkaz	-4.34***	-0.58	-2.02	-2.33
	(1.17)	(1.31)	(1.70)	(1.69)
Jewish	-3.69***	1.04	2.44	-6.13***
	(1.25)	(1.53)	(1.73)	(1.92)
Riot Exposure	0.98***	0.44	-0.12	1.10**
	(0.29)	(0.37)	(0.46)	(0.45)
Controls	✓	✓	✓	✓
Weights	—	—	—	—
N	285	285	285	285
R^2	0.212	0.071	0.097	0.143
		PANEL B		
Anger Treatment	-2.96**	-2.71**	-2.55+	-0.42
	(1.19)	(1.29)	(1.59)	(1.62)
HaMerkaz	-4.76***	-0.91	-2.69+	-2.07
	(1.24)	(1.35)	(1.74)	(1.68)
Jewish	-4.13***	0.52	1.75	-5.88***
	(1.35)	(1.58)	(1.77)	(1.91)
Riot Exposure	1.04***	0.46	-0.13	1.17**
	(0.29)	(0.37)	(0.48)	(0.46)
Controls	✓	✓	✓	✓
Weights	✓	✓	✓	✓
N	285	285	285	285
R^2	0.227	0.075	0.105	0.141
$+\ p < 0.15$, $*\ p < 0.10, **\ p < 0.05,\ ***\ p < 0.01$				

Table 3: **Treatment Effects with Controls (OLS)**. Robust Standard Errors in Parentheses. Post-stratification weights for Jewish subjects are constructed from data Israeli Central Bureau of Statistics (Central Bureau of Statistics, 2011). Regressions with controls control for age, labor force participation, education, political views, and intergroup contact.

	Dep. Variable: Contributions					
	Ingroup		**Outgroup**		**Discrim.**	
Variable	**High Agg.**	**Low Agg.**	**High Agg.**	**Low Agg.**	**High Agg.**	**Low Agg.**
	(1)	(2)	(3)	(4)	(5)	(6)
			PANEL A			
Anger Treatment	-4.31**	-0.028	-2.96	1.53	-1.35	-1.56
	(1.76)	(1.63)	(2.28)	(2.12)	(2.48)	(2.23)
HaMerkaz	-5.45***	-5.27***	-3.94*	-2.30	-1.51	-2.97
	(1.94)	(1.60)	(2.38)	(2.16)	(2.43)	(2.19)
Jewish	-4.86***	-2.37	-1.19	3.80*	-3.67+	-6.17***
	(1.85)	(1.74)	(2.32)	(2.18)	(2.49)	(2.30)
Riot Exposure	—	—	—	—	—	—
Controls	—	—	—	—	—	—
Weights	—	—	—	—	—	—
N	147	150	147	150	147	150
R^2	0.145	0.072	0.034	0.034	0.020	0.056
			PANEL B			
Anger Treatment	-4.03**	-1.15	-4.07*	0.71	0.043	-1.86
	(1.65)	(1.52)	(2.27)	(1.97)	(2.42)	(2.11)
HaMerkaz	-3.37*	-5.04***	-3.78	-1.54	0.41	-3.50+
	(1.95)	(1.52)	(2.92)	(2.07)	(2.81)	(2.17)
Jewish	-5.19**	-3.11*	0.40	4.50**	-5.60*	-7.62***
	(2.01)	(1.58)	(2.53)	(2.21)	(2.89)	(2.39)
Riot Exposure	0.86**	1.27***	-0.80	0.43	1.66***	0.84
	(0.41)	(0.41)	(0.59)	(0.73)	(0.57)	(0.70)
Controls	✓	✓	✓	✓	✓	✓
Weights	—	—	—	—	—	—
N	142	148	142	148	142	148
R^2	0.202	0.239	0.115	0.189	0.135	0.163
			PANEL C			
Anger Treatment	-4.78***	-1.16	-5.00**	0.21	0.23	-1.36
	(1.72)	(1.52)	(2.29)	(1.99)	(2.41)	(2.10)
HaMerkaz	-3.95*	-5.20***	-4.96*	-2.03	1.01	-3.17+
	(2.12)	(1.54)	(2.84)	(2.13)	(2.71)	(2.18)
Jewish	-6.00***	-3.05*	-0.14	3.90*	-5.86**	-6.95***
	(2.15)	(1.62)	(2.56)	(2.29)	(2.89)	(2.39)
Riot Exposure	0.93**	1.29***	-0.69	0.23	1.61***	1.06
	(0.41)	(0.39)	(0.63)	(0.75)	(0.57)	(0.74)
Controls	✓	✓	✓	✓	✓	✓
Weights	✓	✓	✓	✓	✓	✓
N	142	148	142	148	142	148
R^2	0.231	0.248	0.133	0.194	0.142	0.165

$+\ p < 0.15$, $*\ p < 0.10$, $**\ p < 0.05$, $***\ p < 0.01$

Table 4: **High Aggression vs. Low Aggression Contributions (OLS).** Robust Standard Errors in Parentheses. Post-stratification weights for Jewish subjects are constructed from data Israeli Central Bureau of Statistics (Central Bureau of Statistics, 2011). Regressions with controls control for age, labor force participation, education, political views, and intergroup contact.

	PCIs					Jews					Description
Variable	*Obs.*	*Mean.*	*S.D.*	*Min.*	*Max*	*Obs.*	*Mean.*	*S.D*	*Min.*	*Max*	
HaMerkaz	147	0.429	0.497	0	1	150	0.407	0.493	0	1	1 = subject lives in HaMerkaz, 0 otherwise
Time Lived in Neighborhood	147	3.49	0.95	1	4	149	3.12	1.20	1	4	Period of time a subject has lived in their current neighborhood. 1=3 years or less, 2=4-7 years, 3=8-11 years, and 4= 12 or more years.
Anger Treatment	147	0.510	0.502	0	1	150	0.513	0.501	0	1	1= subject receives anger treatment, 0 otherwise
Physical Aggression	143	3.853	2.400	1	7	149	2.691	2.046	1	7	1 to 7 (strongly disagree to strongly agree) I would hit someone if provoked
Age	147	3.73	2.46	1	9	150	4.92	2.80	1	9	1=22-25 yrs., 2=26-30 yrs...9=60-65 yrs.
Education	147	0.517	0.501	0	1	150	0.493	0.502	0	1	1 if they received a Matriculation certificate (Bagrut) at the end of high school , 0 if not. The Bagrut is taken at the end of high school to determine suitability for college and university.
Labor Force	147	0.660	0.475	0	1	150	0.687	0.465	0	1	Employed=1 in the formal labor force, 0 if not
Contact	145	21.4	15.3	0	48	150	11.0	11.0	0	40	Sum # times had coffee/talked on phone/ dinner/ /been in home in past yr. of opposite ethnic group
Political Ingroup	147	8.28	5.98	0	28	150	8.75	5.90	1	28	Used to measure how much they support religious groups that are pro-ingroup. **For Jews**: 1-support Haredi to 7 support Relig. Zion multiplied by their reported level of religiosity (1-secular to 4-very relig.). **For PCIs**:1-oppose to 7 support the Islamic Movement in 1948 Palestine multiplied by religiosity (1-secular to 7-very relig.) and whether the subject was Muslim (0,1)
Perception % Jewish Burla	146	86.8	20.0	0	100	150	82.9	22.6	0	100	% Jewish they thought lived in Shukhnah Burla
Perception % Jewish HaMerkaz	147	61.2	17.8	30	100	149	56.6	24.7	0	100	% Jewish they thought lived in HaMerkaz
Perception % Jewish Old City	146	12.5	21.1	0	100	149	16.6	34.4	0	100	% Jewish they thought lived in Old City
Outgroup Favors Coex.	146	4.27	2.99	1	10	148	4.55	2.98	1	10	For Jews, whether partner in Old City 1- strongly opposes to 10-strongly supports coexistence b/n Arabs and Jews; For PCIs, whether partner in Shuknah Burla 1-strongly opposes to 10-strongly supports coexistence

Table 5: **Variable Description**